

## **REMARKS**

Applicant's counsel thanks the Examiner for the careful consideration given the application. Support for the amendment at the beginning of claim 1 is found in the Specification at page 7, lines 5-7. As requested by the Examiner, the limitation of claim 2 has been placed in claim 1 and claim 2 has accordingly been cancelled. Other informalities have been corrected.

### **Obviousness**

The Examiner has cited Morgan et al. as the closest prior art. The difference between the disclosure of Morgan et al. and claim 1 is that the active substances are in solid form within a single phase in the present invention, while they are in two phases and in solute form (where water forms solvent) in Morgan et al. This teaching is found at col. 4, line 54-56 and at col. 5, lines 1-6 of Morgan.

This difference is the technical feature which renders the invention according to claim 1 non-obvious over the prior art, because it solves the technical problem of the invention.

The technical problem is providing substances to the later part of the intestine to permit a more suitable environment for microflora to grow. The effect of administering the acid and aromatizer together in a single lipid microcapsule is that they have a synergic effect on the growth of microbial flora in this region of the intestine. This is proven by the increase in production of lactic acid in various gastrointestinal portions according to Figure 8, which leads to no change in presence of positive bacteria (ref. Figs. 3 and 4), but a marked decrease of pathogenic and unwanted bacteria (Refs. Figs. 5 and 6).

Morgan et al. does not teach this aspect, and so the rest of the document is not pointing the person skilled in the art towards the solution. Furthermore, the effect of the missing feature on the microflora growth in the later stages of the digestive system taught by the current application is not even suggested or tackled in Morgan et al.

The Examiner also cites Porzio et al. in combination with Morgan et al. In Porzio et al., the encapsulate is taught as anything selected from the list at col 5, line 52-col. 6, line 5. Col. 7, lines 5-15 teaches that the encapsulate will be between 2.5-15 wt % of the entire composition, but it does not teach that a synergic effect can be achieved by retaining them in a uniform lipid matrix.

The Applicant further argues that there are three reasons why the person skilled in the art would not be inclined to combine Porzio et al. with Morgan et al.:

- i) The Examiner states that Porzio et al. is in the "same field of endeavour", which would incline the person skilled in the art to combine the prior art. The Applicant argues that Porzio et al. clearly states (Under the heading "Field of the Invention") that their invention relates to flavour encapsulation compositions, wherein the flavour is encapsulated within a glassy matrix. (ref. col. 1 line 11-16)
- ii) In Porzio et al., the inclusion of the acid and aromatizing agent is in the different phases. The acid forms part of the glassy matrix (B) (ref. col. 5, line 26-50), while the flavourings are present in the materials to be encapsulated (A) (ref. col. 5, line 52-55). Thus, the synergic effect seen in the present application between the aromatizers and acid cannot be seen in anything taught by Porzio et al because of the phase separation.
- iii) Porzio et al. teaches two separate phases in a microcapsule, but the outer phase is a carbohydrate and not lipid phase (ref. col. 5, line 12-15). The present application requires lipid matrix phases to pass through the upper part of the digestive system and therefore this teaching of Porzio et al. is further pointing away from the invention (ref. page 6 line 17-25 of the Application).

For these reasons, the Applicant cannot see how the combination of Porzio et al. with Morgan et al. would lead the person skilled in the art towards including the missing feature of claim 1 in Morgan et al.

Ribier et al. does not add anything further. This invention teaches a vesicle/capsule where there is an outer phase and interior phase at col. 2, line 45-47:

"a composition composed of an aqueous dispersion of vesicles consisting of a membrane of lipid phase encapsulating an aqueous phase,...". Thus the missing technical feature of being present in a single phase is not taught in Ribier et al.

The Applicant argues that the person skilled in the art would not reach the solution of the present application because the combination of all three documents is missing the technical feature according to claim 1. For these reasons, it is submitted that the claims as now presented are novel and inventive and a notice of allowance is accordingly respectfully solicited.

If any additional fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 35826.

Respectfully Submitted,  
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